WHAT IS CLAIMED IS:

1. A method to prepare a male-sterile plant having an increased number of flowers or flowers with increased longevity, comprising:
a) contacting cells of an ornamental plant with a recombinant DNA molecule comprising an expression cassette comprising a stamen-specific promoter operably linked to DNA segment encoding a gene product, the expression of which in a cell results in ablation of that cell, so as to yield transformed plant cells; and
b) regenerating the transformed plant cells to provide a differentiated transformed male-sterile plant having an increase in the number of flowers or flower longevity, or both, relative to the number of flowers or flower longevity in a corresponding plant which does not comprise the expression cassette.

2. The method of claim 1 wherein the promoter is a 108 promoter.

3. The method of claim 1 wherein the promoter is an A3 promoter, an A6 promoter or an A9 promoter.

4. The method of claim 1 wherein the promoter is transcribed in a developmental pattern or at a level that is substantially similar to that of a 108 promoter.

5. The method of claim 1 wherein the promoter is pollen-specific.

6. The method of claim 1 wherein the promoter is tapetal-specific.

7. The method of claim 1 wherein the DNA segment encodes a toxin, lipase, nuclease or protease.

8. The method of claim 1 wherein the DNA segment encodes a RNase.

9. The method of claim 1 wherein the DNA segment encodes barnase.

10. The method of claim 1 wherein the ornamental plant cells are cells of an annual plant.

11. The method of claim 10 which are Petunia or Clematis cells.

12. The method of claim 1 wherein the ornamental plant cells are cells of a perennial plant.

13. The method of claim 1 wherein the ornamental plant cells are cells of a woody plant.

14. The method of claim 13 wherein the ornamental plant cells are cells of a poplar, apple, or chokeberry.

15. The method of claim 1 wherein the ornamental plant cells are cells of a herbaceous plant.

16. The method of claim 1 wherein the expression cassette further comprises a transcription termination sequence.

17. The method of claim 16 wherein the transcription termination sequence is a 7S terminator sequence.

18. The method of claim 1 wherein flower longevity is increased at least 1.1-fold in the differentiated transformed male-sterile plant relative to the corresponding plant which lacks the expression cassette.

19. The method of claim 1 wherein flower longevity is increased at least 1.2-fold in the differentiated transformed male-sterile plant relative to the corresponding plant which lacks the expression cassette.

20. The method of claim 1 wherein flower longevity is increased at least 1.5-fold in the differentiated transformed male-sterile plant relative to the corresponding plant which lacks the expression cassette.

21. Progeny of the differentiated transformed male-sterile plant prepared by the method of claim 1.

22. A differentiated transformed male-sterile plant prepared by the method of claim 1.

23. A method to prepare a female-sterile plant having an increased number of flowers or flowers with increased longevity, comprising:
a) contacting cells of an ornamental plant with a recombinant DNA molecule comprising an expression cassette comprising a pistil-specific promoter operably linked to DNA segment encoding a gene product, the expression of which in a cell results in ablation of that cell, so as to yield transformed plant cells; and
b) regenerating the transformed plant cells to provide a differentiated transformed female-sterile plant having an increase in the number of flowers or flower longevity, or both, relative to the number of flowers or flower longevity of a corresponding plant which does not comprise the expression cassette.

24. The method of claim 23 wherein the promoter is the promoter for beta 1,3 glucanase, PSTMG07, PSTMG08, PSTMG4B12 or PSTMG3C9.

25. The method of claim 23 wherein the promoter is a SP41 promoter.

26. The method of claim 23 wherein the promoter is transcribed in a developmental pattern or at a level that is substantially similar to that of a SP41 promoter.

27. The method of claim 23 wherein the promoter is stigma- or style-specific.

28. The method of claim 23 wherein the promoter is ovary- or ovule-specific.

29. The method of claim 23 wherein the DNA segment encodes a toxin, lipase, nuclease or protease.

30. The method of claim 29 wherein the DNA segment encodes a RNase.

31. The method of claim 23 wherein the DNA segment encodes barnase.

32. The method of claim 23 wherein the ornamental plant cells are cells of an annual plant.

33. The method of claim 23 wherein the ornamental plant cells are cells of a perennial plant.

34. The method of claim 33 wherein the ornamental plant cells are Petunia or Clematis cells.

35. The method of claim 20 wherein the ornamental plant cells are cells of a woody plant.

36. The method of claim 35 wherein the ornamental plant cells are cells of a poplar, apple or chokeberry.

37. The method of claim 23 wherein the ornamental plant cells are cells of a herbaceous plant.

38. The method of claim 23 wherein the expression cassette further comprises a transcription termination sequence.

39. The method of claim 38 wherein the transcription termination sequence is a 7S terminator sequence.

40. The method of claim 23 wherein flower longevity is increased at least 1.1-fold in the differentiated transformed female-sterile plant relative to the corresponding plant which lacks the expression cassette.

41. The method of claim 23 wherein flower longevity is increased at least 1.2-fold in the differentiated transformed female-sterile plant relative to the corresponding plant which lacks the expression cassette.

42. The method of claim 23 wherein flower longevity is increased at least 1.5-fold in the differentiated transformed female-sterile plant relative to the corresponding plant which lacks the expression cassette.

43. Progeny of the differentiated transformed female-sterile plant prepared by the method of claim 23.

44. A differentiated transformed female-sterile plant prepared by the method of claim 23.

45. A method to prepare a male-sterile, female-sterile plant having an increased number of flowers or flowers with increased longevity, comprising: introducing to the plant of claim 21 or 22 a recombinant DNA molecule comprising an expression cassette comprising a pistil-specific promoter

operably linked to DNA segment encoding a gene product, the expression of which in a cell results in ablation of that cell, so as to yield a male-sterile, female-sterile plant having an increased number of flowers or flowers with increased longevity.

46. A method to prepare a male-sterile, female-sterile plant having an increased number of flowers or flowers with increased longevity, comprising:
crossing the plant of claim 21 or 22 with the plant of claim 43 or 44, so as to yield a male-sterile, female-sterile plant having an increased number of flowers or flowers with increased longevity.

47. A method to prepare a male-sterile, female-sterile plant having an increased number of flowers or flowers with increased longevity, comprising:
a) contacting cells of an ornamental plant with a first recombinant DNA molecule comprising a first expression cassette comprising a pistil-specific promoter operably linked to DNA segment encoding a gene product, the expression of which in a cell results in ablation of that cell, and a second recombinant DNA molecule comprising a second expression cassette comprising a stamen-specific promoter operably linked to DNA segment encoding a gene product, the expression of which in a cell results in ablation of that cell, so as to yield transformed plant cells; and
b) regenerating the transformed plant cells to provide a differentiated transformed male-sterile, female-sterile plant having an increase in the number of flowers or flower longevity, or both, relative to the number of flowers or flower longevity of a corresponding plant which does not comprise one or both expression cassettes.